



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/596,591	06/16/2006	Hyeong-Ryeol Oh	117865-001	8154
24573	7590	09/11/2008		
BELF., BOYD & LLOYD, LLP				
P.O. Box 1135				
CHICAGO, IL 60690				
EXAMINER				
SMITH, LINDA B				
ART UNIT		PAPER NUMBER		
2862				
MAIL DATE		DELIVERY MODE		
09/11/2008		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/596,591

Applicant(s)

OH ET AL.

Examiner

LINDA B. SMITH

Art Unit

2862

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-78 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 50 is/are rejected.
- 7) ☒ Claim(s) 3-49 and 51-78 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 June 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/S508)
Paper No(s)/Mail Date 10/23/2006
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. Amendment A, received on 6/16/2006 has been entered into record. Claims 1-49 and 51-78 have been amended.
2. Claims 1-78 are now pending for examination.

Priority

3. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

4. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description:

Paragraphs [0212, 0216-0221 and 0308], shows reference characters that are not reflected in their respective figures (i.e. Figs. 32-40). For example, Fig. 32, do not reflect the zoom driving coil 711 or the focus driving coil, but they are reflected in Fig. 33. Another example, in paragraph [0216], Fig. 33 is mentioned as reflecting the initial position of the displacement lens and compensation lens groups; Fig. 34 is actually the correct figure that reflects the initial position. These are a two of the examples, there more reflected in the above mentioned paragraphs.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

5. The disclosure is objected to because of the following informalities:
 - a. Paragraph [0211] shows two misspelled words -- "lement 602" -- should read "element" also -- "untraviolet"-- should read "ultraviolet".
 - b. Paragraph [0212, lines 11-12] reference is made to "two driving coils 608 and 653", previous reference connected to these driving coils shows "703" and "711" and "608 and 653" have been referenced as zoom driving part (653) and focus driving part (608).
 - c. Paragraph [0213] shows misspelled word --- "displacement"--- should read -- "displacement"--.
- Appropriate correction is required.

6. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Objections

7. The claim 12 is objected to because it includes a reference character which is not enclosed within parentheses.

Reference characters corresponding to elements recited in the detailed description of the drawings and used in conjunction with the recitation of the same element or group of elements in the claims should be enclosed within parentheses so as to avoid confusion with other numbers or characters which may appear in the claims. See MPEP § 608.01(m).

8. Claim 52 is objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim can not depend on itself. See MPEP § 608.01(n). Accordingly, the claim 52 has not been further treated on the merits.

9. Claim 52 is objected to because of the following informalities: It contains a misspelled word -- "pat" -- should read as "part". Appropriate correction is required.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Yumiki et al. (US Patent No. 6,456,444 B1 and hereinafter Yumiki).

12. As to claim 1, Yumiki discloses all the features of the claimed invention. Yumiki discloses an image photographing apparatus comprising:

a compensation lens group (**col. 2, lines 46-56 and col. 10, lines 40-48, 61-63**);

a focusing driving part for fixing the compensation lens group (**col. 7, lines 13-18 and col. 10, lines 40-48, item #2**);

a focus actuator (**item #33 or #6p and #6y**) transferring the focusing driving part to an optical axis for controlling the focus of the compensation lens group [claim 1](**col. 7, lines 13-28 and col. 10, lines 49-col. 11, line 20**);

a fixing part (**34**) for supporting the focus actuator (**col. 7, lines 18-28 and col. 10, lines 44-48**);

a photographing element for photographing an image of an object passing the compensation lens group (**col. 2, lines 39-45**); and

a controlling part (**PCB**) for controlling the focus actuator and the photographing element (**col. 4, lines 39-65**).

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

15. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yumiki in view of Iwata et al. (US Patent No. 4,596,449 and hereinafter Iwata).

16. As to claim 2, Yumiki discloses an image photographing apparatus comprising:

a compensation lens group (**col. 2, lines 46-56 and col. 10, lines 40-48, 61-63**);

a focus actuator for controlling the focusing of the compensation lens group (**col. 7, lines 13-28 and col. 10, lines 49-col. 11, line 20**);

a first zoom driving part for supporting the focus actuator (**col. 7, lines 13-34**);

a displacement (**45**) lens group (**col. 8, lines 54-56**);

a second zoom driving part for supporting the displacement lens group (**col. 8, lines 57-67**); a photographing element for photographing an image of an object passing the compensation lens group and the displacement lens group(**col. 2, lines 39-45**); and

a controlling part (**PCB**) for controlling the focus actuator, the zoom actuator and the photographing element (**col. 4, lines 39-65**).

Yumiki does not expressly disclose:

a zoom actuator for driving the first zoom driving part to move the compensation lens group along a first moving trajectory, which is a zoom transition part, and driving the second zoom driving part to move the displacement lens group along a second moving trajectory, which is a path of a zoom transition path.

Iwata discloses a zoom lens apparatus having:

a zoom actuator for driving the first zoom driving part to move the compensation lens group along a first moving trajectory, which is a zoom transition part, and driving the second zoom driving part to move the displacement lens group along a second moving trajectory, which is a path of a zoom transition path (**col. 3, lines 65-col. 4, line 1 and col. 4, lines 40-49**).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the lens barrel of Yumiki with a single moving mechanism as taught by Iwata to make the outer appearance of the lens barrel compact in size without having to change the shape as well as reducing the cost of manufacturing by providing a simplified moving mechanism for the lens group (**col. 4, lines 53-59**).

17. Claim 50 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ohkawara et al. (US Patent No. 6,356,307 B2 and hereinafter Ohkawara) in view of Iwata.

18. As to claim 50, Ohkawara discloses an image photographing apparatus comprising: a focus lens (105) group (**abstract, col. 7, lines 32-42 and col. 17, lines 13-15**); a focus actuator (120) for adjusting the focusing of the focusing lens group; a fixing part for supporting the focus actuator; a compensation lens (105) group (**col. 7, lines 32-42, 54-59**); a third zoom driving part (119) for supporting the compensation lens group (**col. 8, lines 44-62**); a displacement lens (102) group (**col. 7, lines 5-10, 24-26**); a second zoom driving part (118) for supporting the displacement lens group (**col. 7, lines 24-26 and col. 8, lines 48-54**); a zoom actuator for driving the third zoom driving part to move the compensation lens group along the first moving trajectory, and for driving the second zoom driving part to move the displacement lens group along the second moving trajectory; a photographing element (106) for photographing an object image passing the compensation lens group and the displacement lens group (**col. 7, lines 60-col. 8, line 2**); and a controller part (115) for controlling the focus actuator, the zoom actuator and the photographing element (**col. 8, lines 34-47, col. 9, lines 44-col. 10, line 26, Fig. 6**).

Allowable Subject Matter

19. Claims 3-49 and 51-78 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Prior Art Made of Record

20. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. Uno et al. (US Patent No. 5,907,724) discloses lens barrel and camera provided with a lens barrel capable of both zooming and focusing.
- b. Ishikawa (US Patent No. 5,724,194) discloses optical apparatus including zooming means focus including a part having a backlash and correction means for correcting the backlash of the focus apparatus.
- c. Bergmann et al. (US Patent No. 6,253,005 B1) discloses apparatus and method for compensating for misalignment in reflective packages.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LINDA B. SMITH whose telephone number is (571)270-3827. The examiner can normally be reached on Monday through Friday 7:30AM-5:00PM EST..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Assouad can be reached on (571) 272-2210. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Linda B Smith/
Examiner, Art Unit 2862

/Patrick J Assouad/
Supervisory Patent Examiner, Art Unit 2862